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DEPARTMENT OF THE INTERIOR

OCS
No. 68
DES
1982
V. 2

ENVIRONMENTAL IMPACT STATEMENT

BUREAU OF LAND MANAGEMENT
Library
Denver Service Center

PROPOSED

1982 OUTER CONTINENTAL SHELF OIL AND GAS

LEASE SALE OFFSHORE SOUTHERN CALIFORNIA

OCS SALE NO. 68 VOLUME 2 OF 2

Prepared by

Bureau of Land Management
Dept. of the Interior

BLM-YN-ES-81-001-1792

1981

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195
.P4
C3462
1982
v.2

Final Environmental Impact Statement
Proposed 1982 Outer Continental Shelf Oil and Gas Lease Sale No. 68
Offshore Southern California

ERRATA SHEET FOR LARGE COLOR VISUAL

The bar scale shown is for 1:1,000,000. Attach correct 1:500,000 bar scale (enclosed) over scale on visual.

The correct spelling of San Nicholas and Cortez are San Nicolas and Cortes, respectively, as per the U.S. Board on Geographic Names.

The positioning of the Channel Island National Marine Sanctuary boundary and of the shipping lanes are approximate.

Platforms and pipelines are shown on the Transportation Visual.

Tract 336 should be colored lime green, the same as other existing leases.

The tract at 52N-63W is mistakenly colored purple. It should be colored lime green as it is part of existing Lease OCS-P-166.

The shoreline was omitted around Begg Rock.

The following two map grid systems are used to designate tracts.

State Plane System

Blocks that are based on the California (Lambert) Plane Coordinate System Zone 6 have X origin=2,000,000 at $116^{\circ}15'$ and Y origin=0.00 at $32^{\circ}10'$. The identification of the State Plane blocks are based on the numerical sequence N (north) starting at Y origin and the numerical sequence W (west) starting at the central meridian; example: Block 26N-82W. Each regular block in the State Plane System contains 5,760 acres.

Universal Transverse Mercator (UTM) System

The boundaries of the regular UTM blocks are 4,800 international meters on a side and contain 2,304 hectares. The regular boundaries are defined in terms of X and Y coordinates of the Universal Transverse Mercator Grid System based on the Clark Spheroid of 1866.

The blocks are numbered starting with the first tier northerly of the equator as "N 1". The first range of blocks westerly of the central meridian of each UTM zone is designated "E 100". Thus, a block numbered "N 200-E 96" would be the 200th block northerly of the equator and the fifth block of the central meridian of the respective UTM zone.

Color misregistration during printing resulted in shifting of State leases to the north, and double or triple colors at symbols.

Numerous blemishes due to printing also occurred such as the green line at 21,22N-54W and the white spot at 11N-42W.

(over)

Legend

Change:

"Proposed tracts" should be "Proposed Sale No. 68 tracts".

"Sale No. 68 tracts assigned..." should be "Proposed Sale No. 68 tracts assigned...".

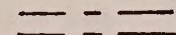
"Channel Islands Marine Sanctuary" should be "Channel Islands National Marine Sanctuary".

"Federal Ecological Preserve" should be "Santa Barbara Channel Ecological Preserve".

"Federal Ecological Preserve Buffer Zone" should be "Adjunct to the Santa Barbara Channel Ecological Preserve (Buffer Zone)".

The symbol for sewer outfalls should be  (green)

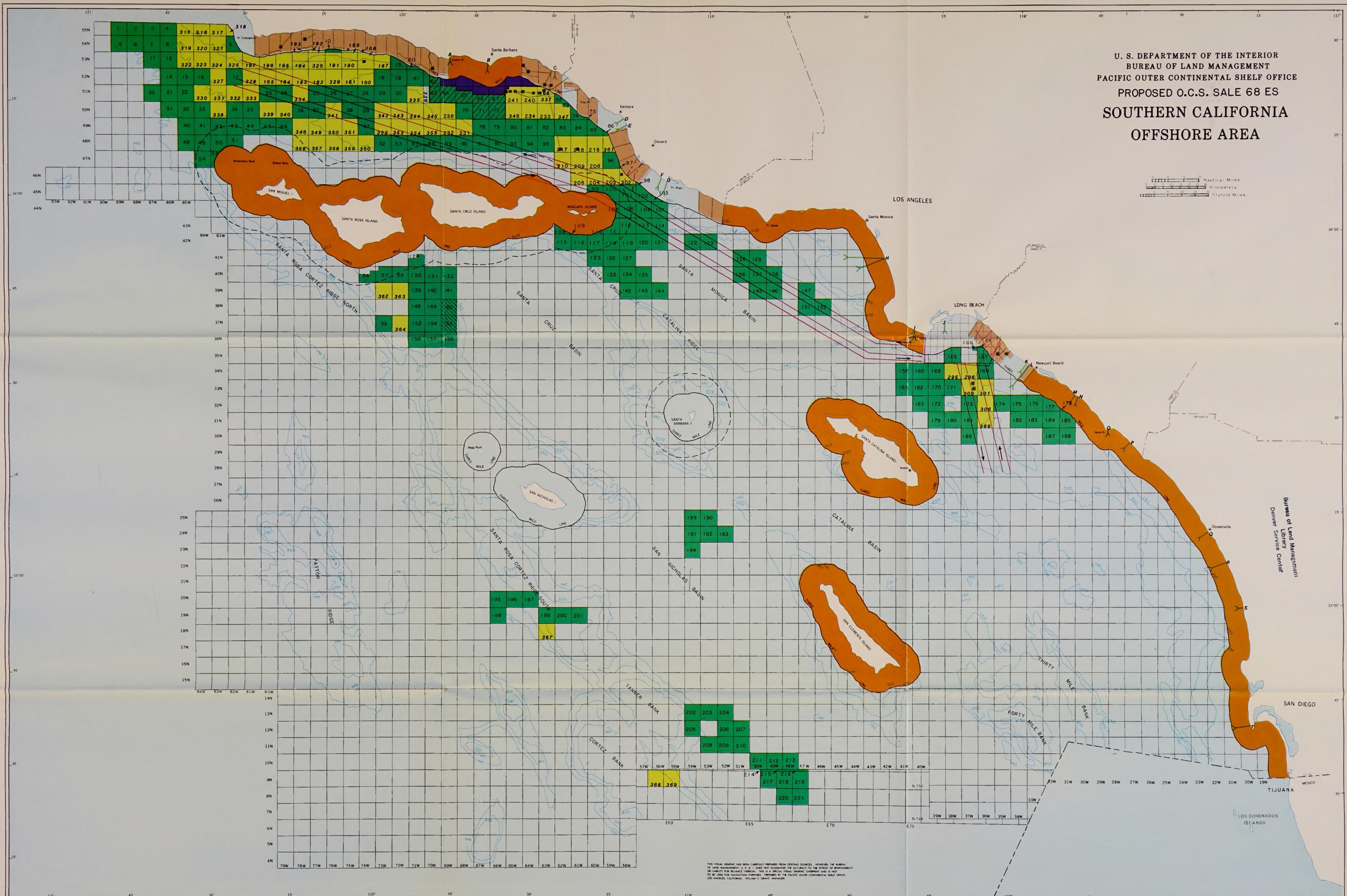
The letters A through T refer to the sewage dischargers.

Add:  (red) Port Hueneme Safety Fairway.

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
PACIFIC OUTER CONTINENTAL SHELF OFFICE
PROPOSED O.C.S. SALE 68 ES
**SOUTHERN CALIFORNIA
OFFSHORE AREA**

1 Nautical Miles
1 Kilometer
1 Statute Miles

Bureau of Land Management
Library Service Center
Denver



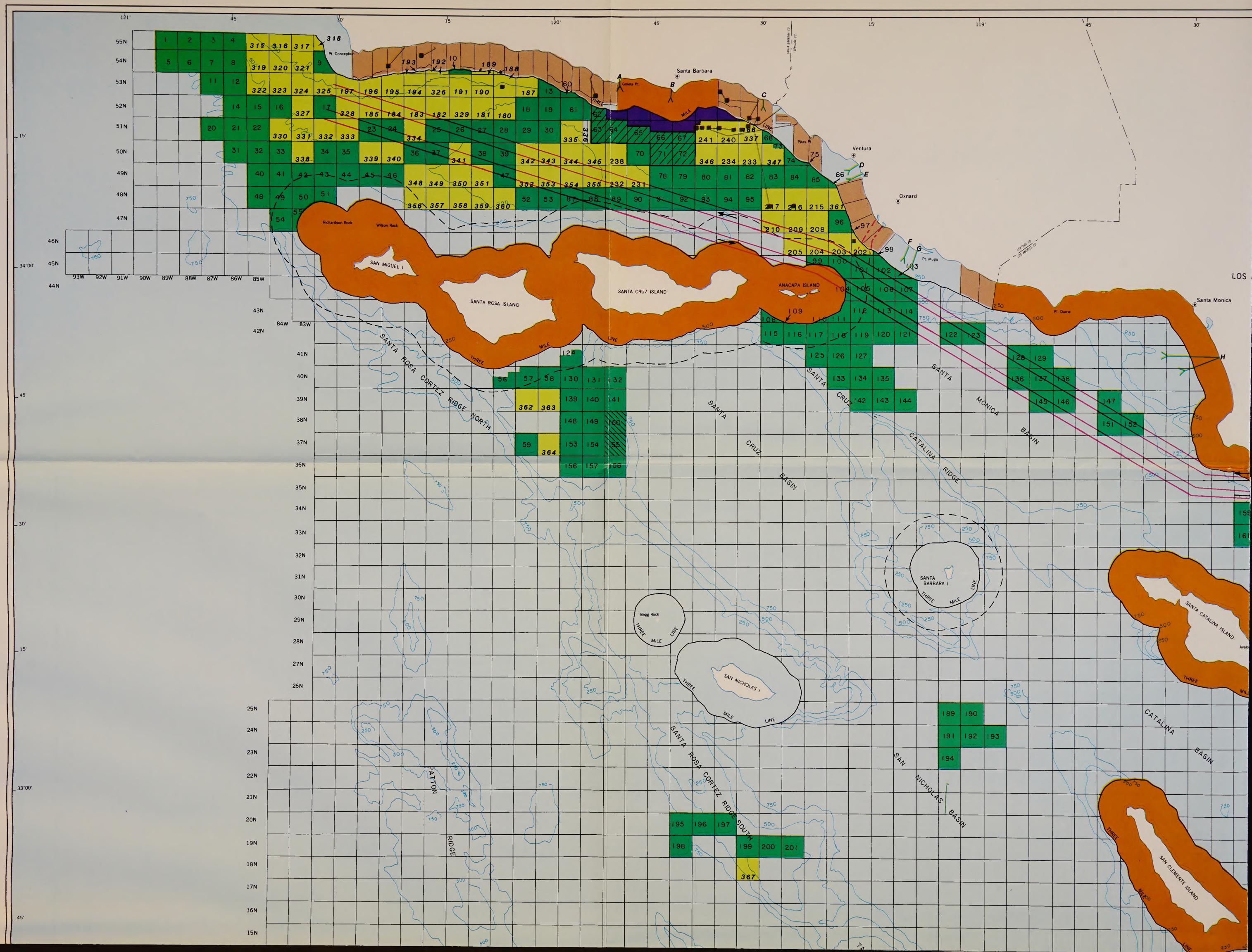
EXISTING LEASES
PROPOSED TRACTS
STATE LEASES

SALE #68 TRACT ASSIGNED TO EXISTING LEASE
STATE OIL AND GAS SANCTUARY
CHANNEL ISLANDS MARINE SANCTUARY

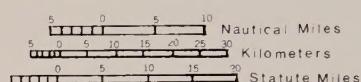
FEDERAL ECOLOGICAL PRESERVE
FEDERAL ECOLOGICAL PRESERVE BUFFER ZONE
COUNTY BORDERS

TRAFFIC SEPARATION SCHEME
EXISTING PLATFORMS
SEWER OUTFALLS
EXISTING PIPELINES

500 BATHYMETRY (DEPTH IN METERS)



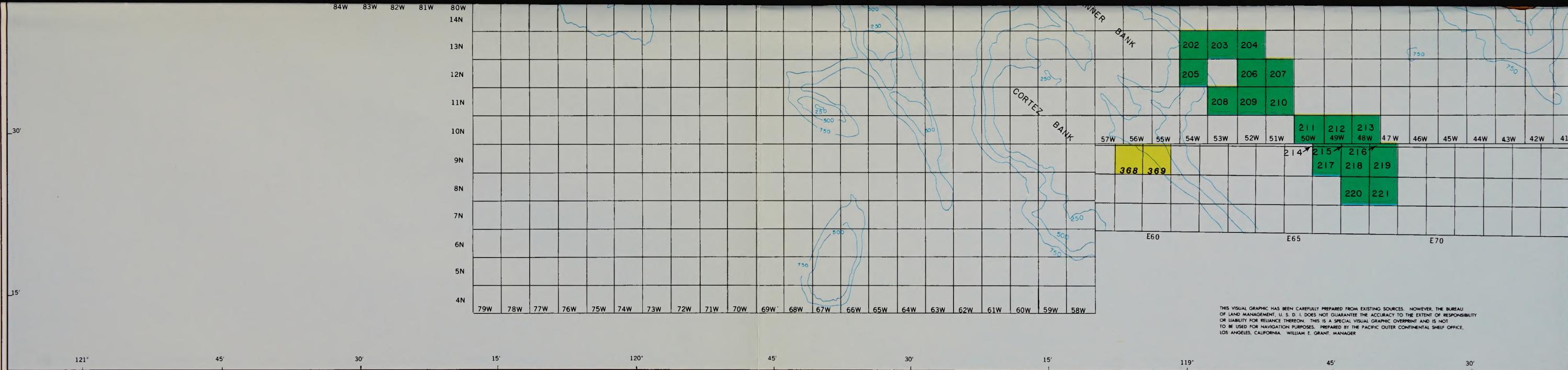
U. S. DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT
 PACIFIC OUTER CONTINENTAL SHELF OFFICE
 PROPOSED O.C.S. SALE 68 ES
**SOUTHERN CALIFORNIA
OFFSHORE AREA**


 Nautical Miles
 Kilometers
 Statute Miles

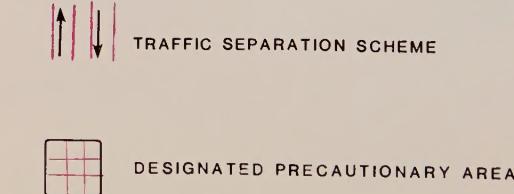
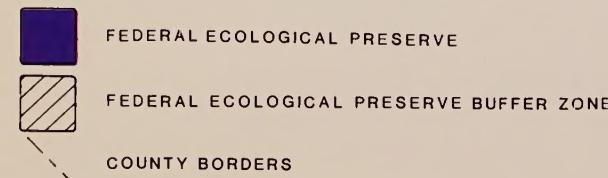
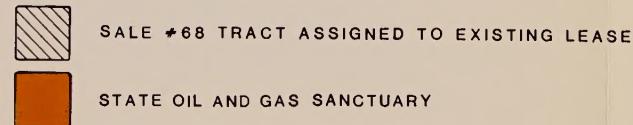
ANGELES

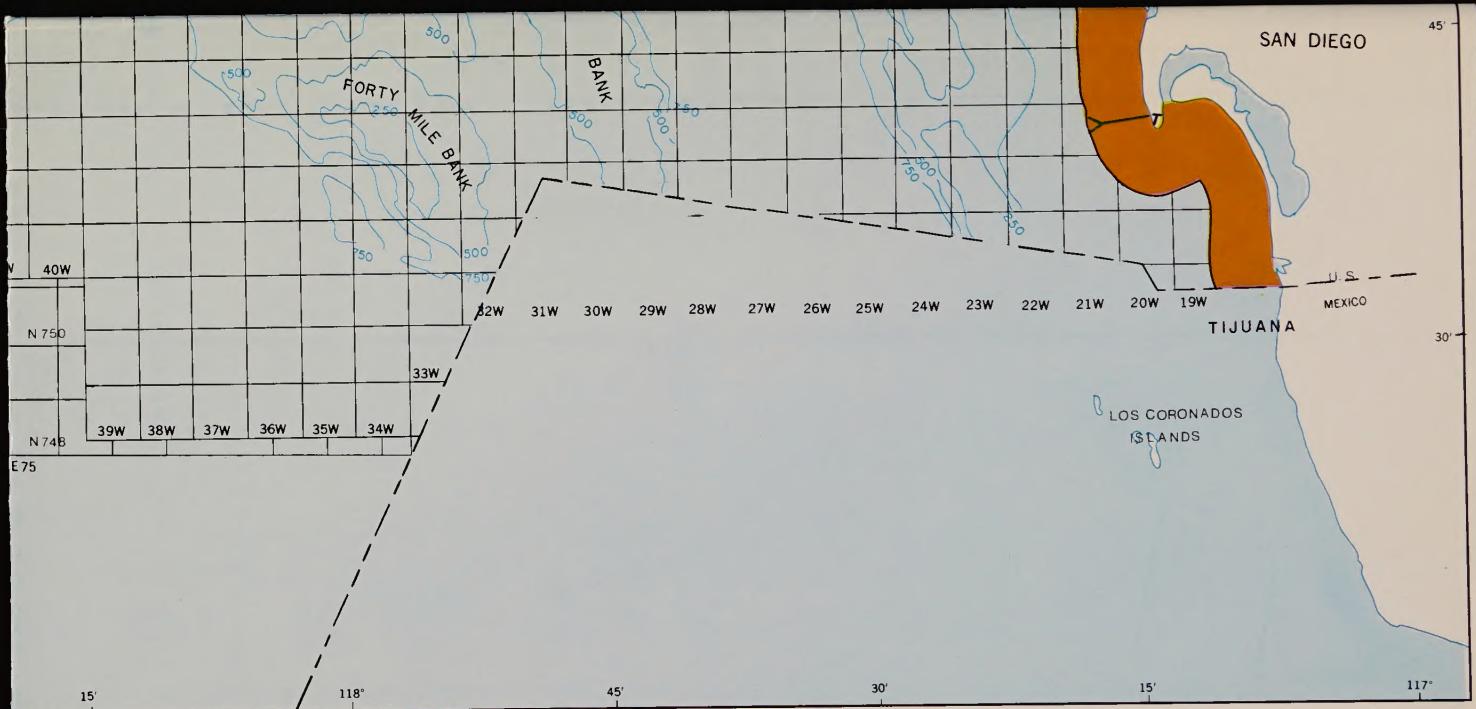


Bureau of Land Management
 Library Service Center
 Denver



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EXISTING PLATFORMS

EXISTING PIPELINES

A SEWER OUTFALLS

500 BATHYMETRY (DEPTH IN METERS)

MUNICIPAL WASTE WATER DISCHARGES TO
SOUTHERN CALIFORNIA COASTAL WATERS, 1971

MUNICIPAL WASTE WATER DISCHARGES TO SOUTHERN CALIFORNIA COASTAL WATERS, 1971													
Discharger					Ocean Outfall		Discharger					Ocean Outfall	
Map Ltrs.	Name	Flow (mgd)	Type of Treatment	Length (m)	Depth (m)	Map Ltrs.	Name	Flow (mgd)	Type of Treatment	Length (m)	Depth (m)		
A	Goleta San. Dist.	5.0	Primary	1,800	28	J	City of Los Angeles						
B	City of Santa Barbara	8.0	Primary	1,100	14		Terminal Island	8.1	Primary	730	18		
	Montecito San. Dist.	0.8	Secondary	440	11		Sunset Bch. San. Dist.	0.2	Primary	520			
	Summerland San. Dist.	0.1	Secondary	240	6		Orange Co. San. Dist.			8,300	60		
C	Carpinteria San. Dist.	1.3	Secondary	920	9	K	Plant No. 1	45.0	Primary				
								10.0	Secondary				
D	City of San Buenaventura					L	Plant No. 2	75.0	Primary				
	Seaside Plant	2.7	Primary	800	11								
E	Eastside Plant	4.0	Secondary			M	City of Laguna Bch.	2.3	Primary	980	25		
F	Port Hueneme San. Dist.	3.5	Primary	1,900	18	N	So. Laguna Bch. San. Dist.	1.2	Secondary	520	18		
G	City of Oxnard	12.0	Primary	1,750	16	O	Dana Point San. Dist.	2.3	Secondary	1,200	12		
H	City of Los Angeles					P	City of San Clemente	1.8	Secondary	210	9		
	Hyperion Plant	235.0	Primary	8,000	60	Q	City of Oceanside	4.0	Secondary				
		100.0	Secondary	(effluent)					Oxidation				
		5.0	Primary	11,000	100				Pond				
I	Los Angeles Co. San. Dist.					R	County of San Diego						
	Joint Water Pollution						Encina (Vista-Carlsbad)	4.7	Primary	5,300	30		
	Control Plant	371.0	Primary	2,000	50	S	San Elijo (Cardiff-						
				2,600	65		Solana Beach)	1.1	Primary	3,700	15		
T	City of San Diego												
	Point Loma Plant												
	Joint International Outfall							90.0	Primary	3,200	64		
								6.0	Chlorination	43	0		

MUNICIPAL WASTE WATER DISCHARGES TO
SOUTHERN CALIFORNIA COASTAL WATERS, 1971

Discharger				Ocean Outfall		Discharger	
Map Ltrs.	Name	Flow (mgd)	Type of Treatment	Length (m)	Depth (m)	Map Ltrs.	Name
A	Goleta San. Dist.	5.0	Primary	1,800	28	J	City of Los Angeles
B	City of Santa Barbara	8.0	Primary	1,100	14		Terminal Island
	Montecito San. Dist.	0.8	Secondary	440	11		Sunset Bch. San. Dis.
	Summerland San. Dist.	0.1	Secondary	240	6		Orange Co. San. Dist.
C	Carpinteria San. Dist.	1.3	Secondary	920	9	K	Plant No. 1
D	City of San Buenaventura Seaside Plant	2.7	Primary	800	11	L	Plant No. 2
E	Eastside Plant	4.0	Secondary			M	City of Laguna Bch.
F	Port Hueneme San. Dist.	3.5	Primary	1,900	18	N	So. Laguna Bch. San.
G	City of Oxnard	12.0	Primary	1,750	16	O	Dana Point San. Dist.
H	City of Los Angeles Hyperion Plant	235.0	Primary	8,000	60	P	City of San Clemente
		100.0	Secondary	(effluent)		Q	City of Oceanside
		5.0	Primary	11,000	100		
				(sludge)		R	County of San Diego
I	Los Angeles Co. San. Dist. Joint Water Pollution Control Plant	371.0	Primary	2,000	50	S	Encina (Vista-Carl) San Elijo (Cardiff Solana Beach)
						T	City of San Diego

Ocean Outfall

	Flow (mgd)	Type of Treatment	Length (m)	Depth (m)
t.	8.1	Primary	730	18
.	0.2	Primary	520	
			8,300	60
	45.0	Primary		
	10.0	Secondary		
	75.0	Primary		
Dist.	2.3	Primary	980	25
.	1.2	Secondary	520	18
	2.3	Secondary	1,200	12
	1.8	Secondary	210	9
	4.0	Secondary		
		Oxidation		
		Pond		
sbad)	4.7	Primary	5,300	30
-	1.1	Primary	3,700	15

2,600

65

3,600

60

Point Loma Plant
Joint International

	90.0	Primary	3,200	64
Outfall	6.0	Chlorination	43	0

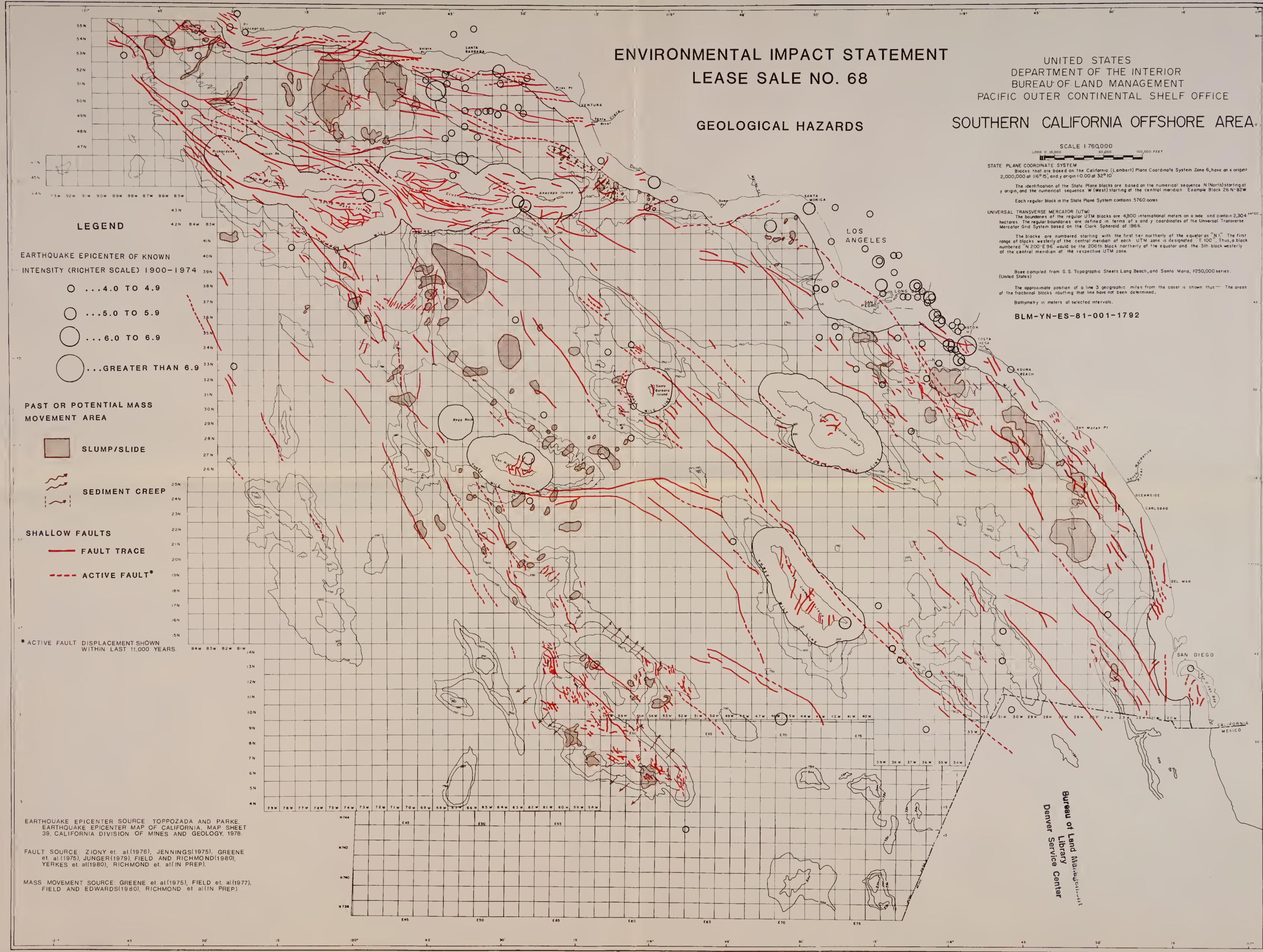
ENVIRONMENTAL IMPACT STATEMENT

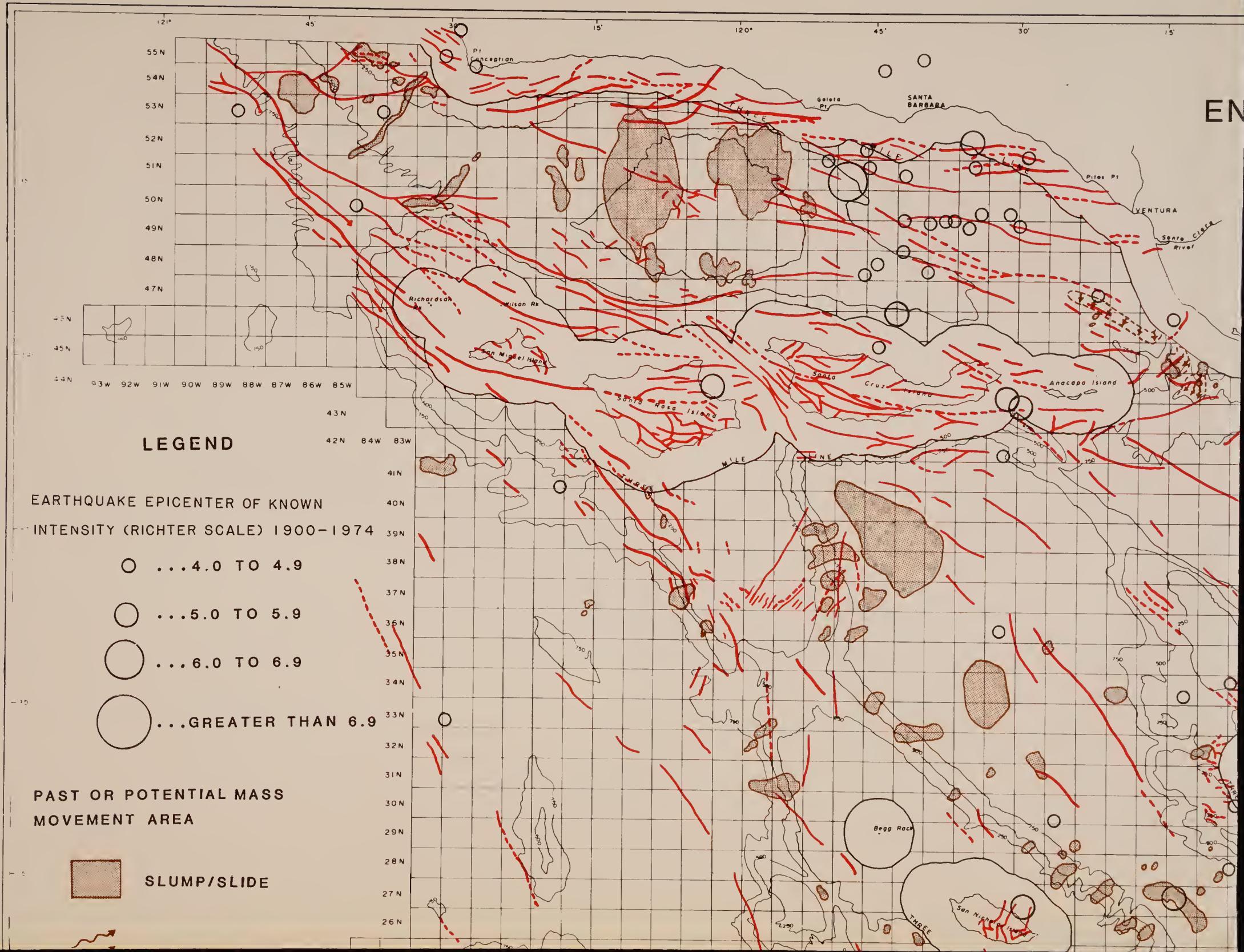
LEASE SALE NO. 68

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
PACIFIC OUTER CONTINENTAL SHELF OFFICE

GEOLOGICAL HAZARDS

SOUTHERN CALIFORNIA OFFSHORE AREA





ENVIRONMENTAL IMPACT STATEMENT LEASE SALE NO. 68

GEOLOGICAL HAZARDS

119° 46° 30° 15° 118° 45° 30° 15° 117°

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
PACIFIC OUTER CONTINENTAL SHELF OFFICE

SOUTHERN CALIFORNIA OFFSHORE AREA

SCALE 1:760,000
0 10,000 60,000 100,000 FEET

STATE PLANE COORDINATE SYSTEM

Blocks that are based on the California (Lambert) Plane Coordinate System Zone 6, have an x origin = 2,000,000 of 116° 15', and y origin = 0.00 of 32° 10'.

The identification of the State Plane blocks are based on the numerical sequence N (North) starting at y origin, and the numerical sequence W (West) starting of the central meridian. Example Block 26 N-82W.

Each regular block in the State Plane System contains 5760 acres.

UNIVERSAL TRANSVERSE MERCATOR (UTM)

The boundaries of the regular UTM blocks are 4,800 international meters on a side and contain 2,304^{34°00'} hectares. The regular boundaries are defined in terms of x and y coordinates of the Universal Transverse Mercator Grid System based on the Clark Spheroid of 1866.

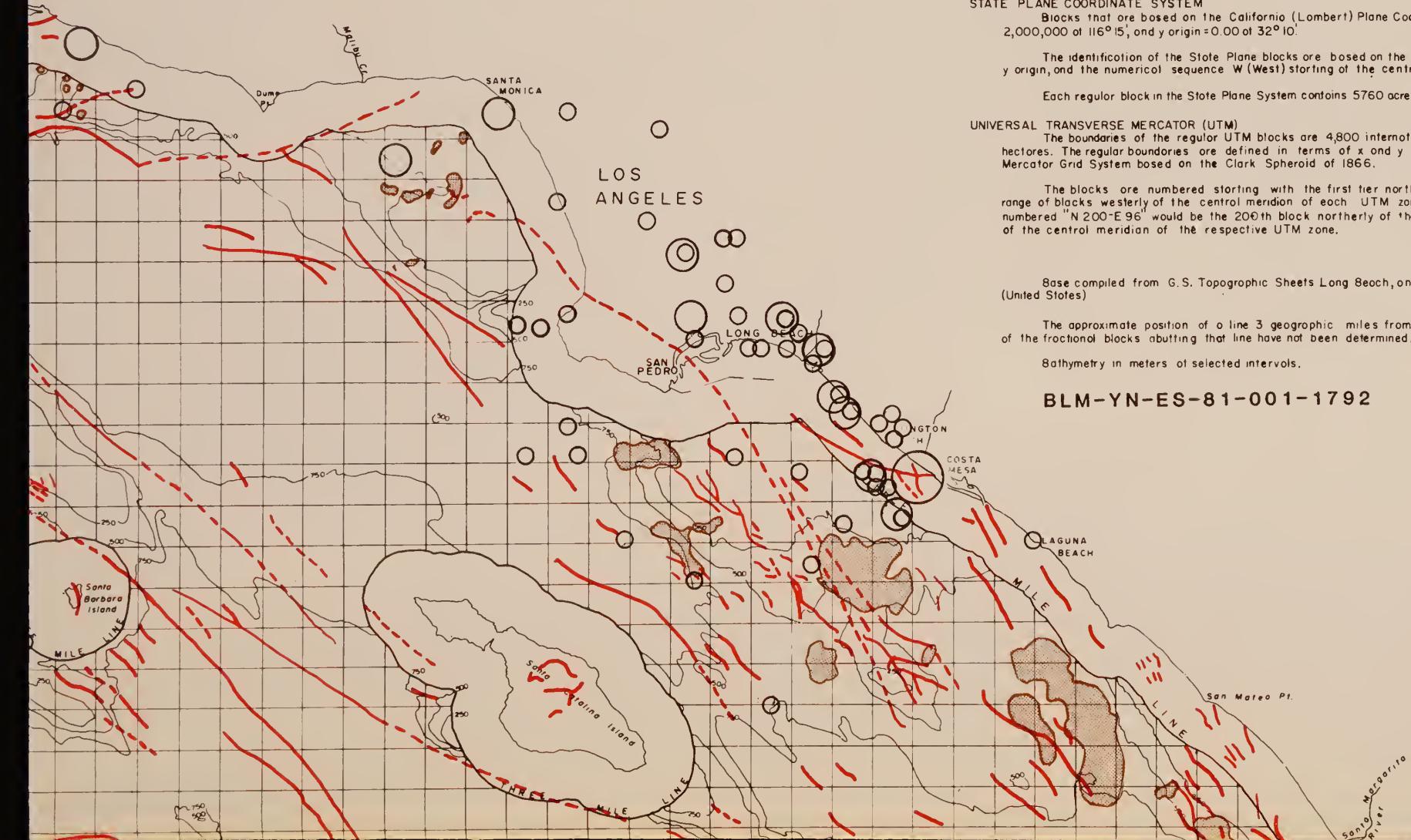
The blocks are numbered starting with the first tier northerly of the equator as "N1". The first range of blocks westerly of the central meridian of each UTM zone is designated "E 100". Thus, a block numbered "N 200-E 96" would be the 200th block northerly of the equator and the 8th block westerly of the central meridian of the respective UTM zone.

Base compiled from G.S. Topographic Sheets Long Beach, and Santa Maria, 1:250,000 series.
(United States)

The approximate position of a line 3 geographic miles from the coast is shown thus— The areas of the fractional blocks abutting that line have not been determined.

Bathymetry in meters of selected intervals.

BLM-YN-ES-81-001-1792



30°

45°

30°

15°

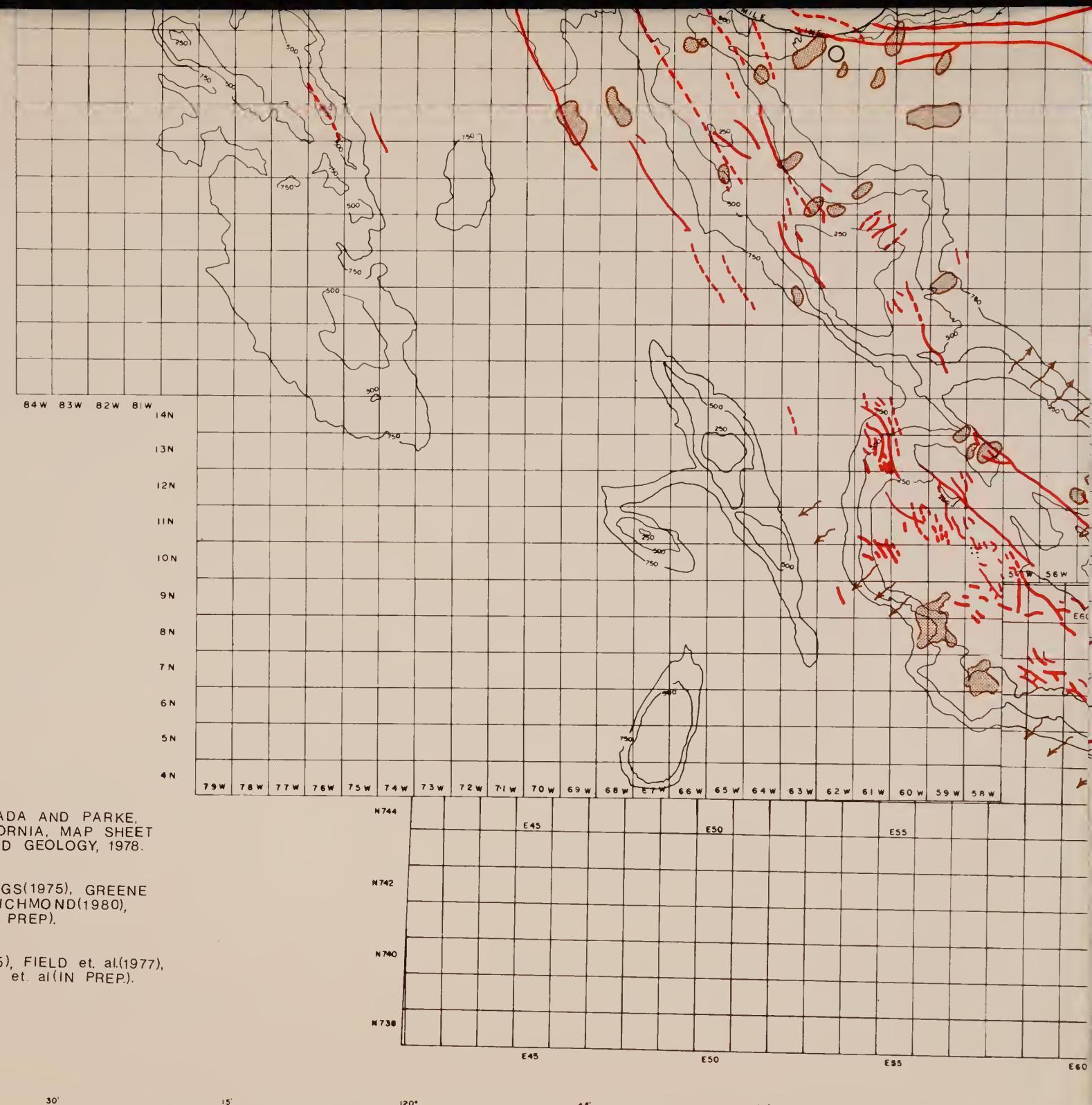
SEDIMENT CREEP

SHALLOW FAULTS

— FAULT TRACE

- - - ACTIVE FAULT*

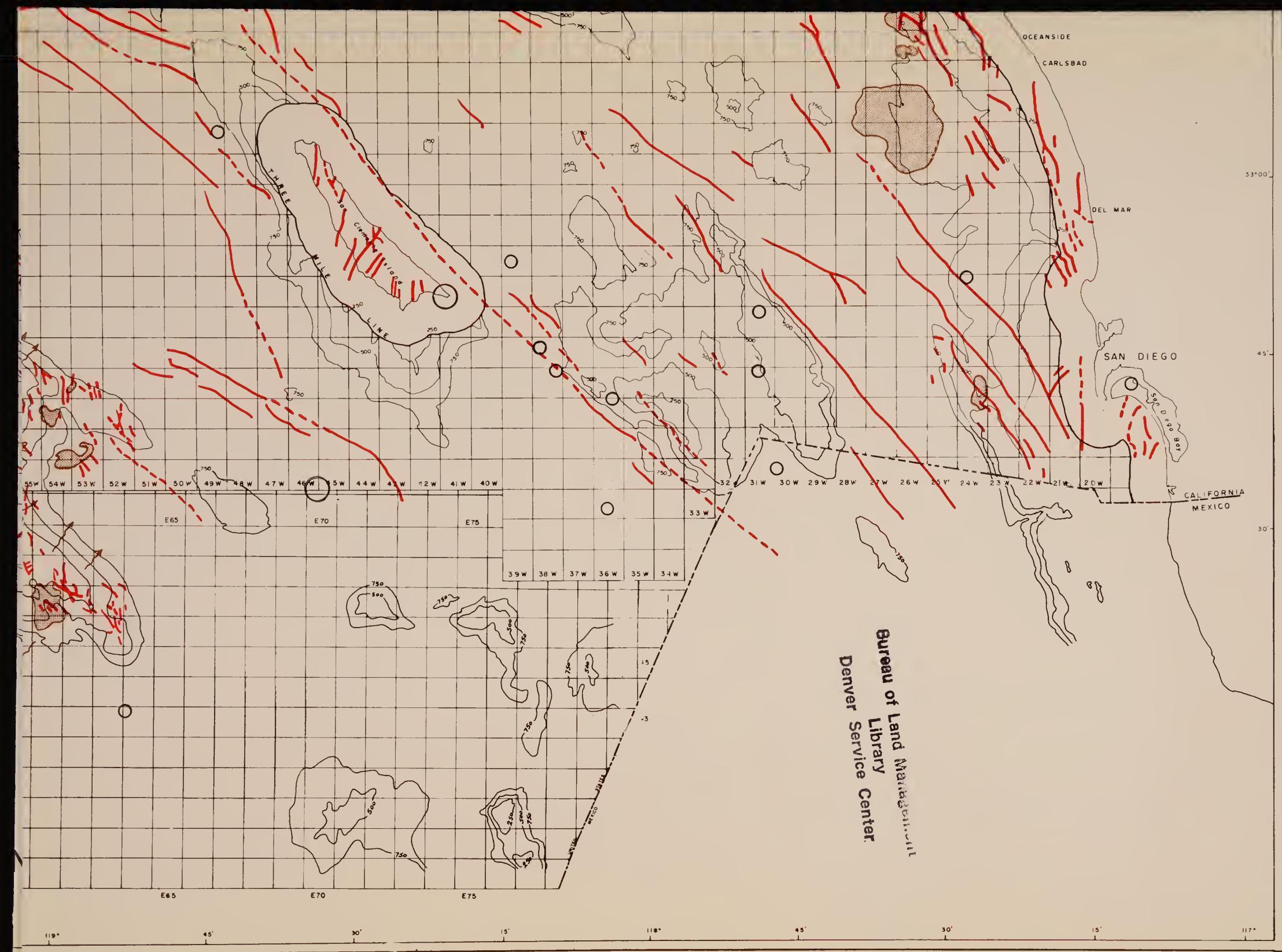
* ACTIVE FAULT: DISPLACEMENT SHOWN
WITHIN LAST 11,000 YEARS.



EARTHQUAKE EPICENTER SOURCE: TOPPOZADA AND PARKE,
EARTHQUAKE EPICENTER MAP OF CALIFORNIA, MAP SHEET
39, CALIFORNIA DIVISION OF MINES AND GEOLOGY, 1978.

FAULT SOURCE: ZIONY et. al.(1976), JENNINGS(1975), GREENE
et. al.(1975), JUNGER(1979), FIELD AND RICHMOND(1980),
YERKES et. al(1980), RICHMOND et. al(IN PREP.).

MASS MOVEMENT SOURCE: GREENE et. al.(1975), FIELD et. al(1977),
FIELD AND EDWARDS(1980), RICHMOND et. al(IN PREP.).



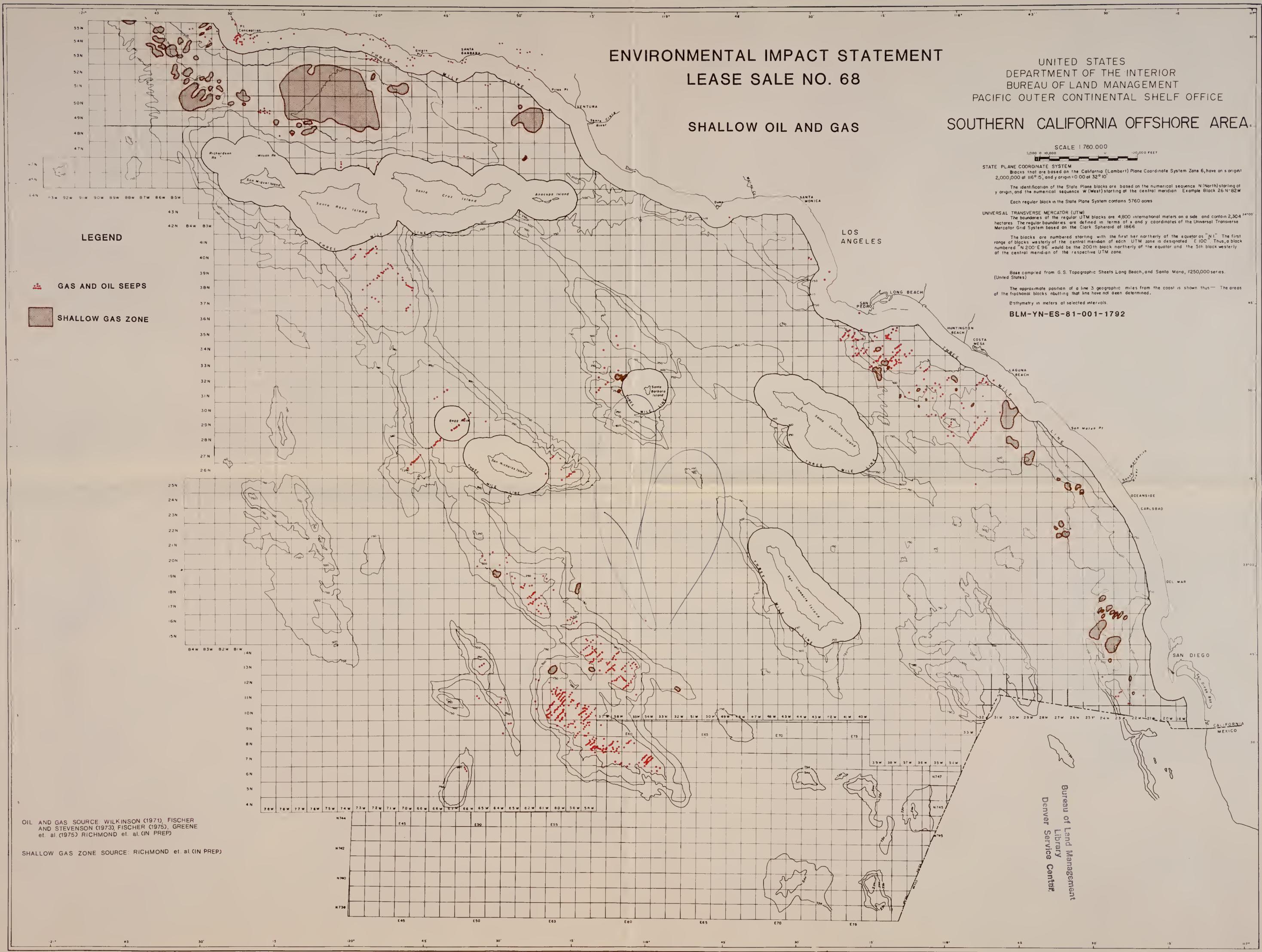
Bureau of Land Management
Library Service Center
Denver

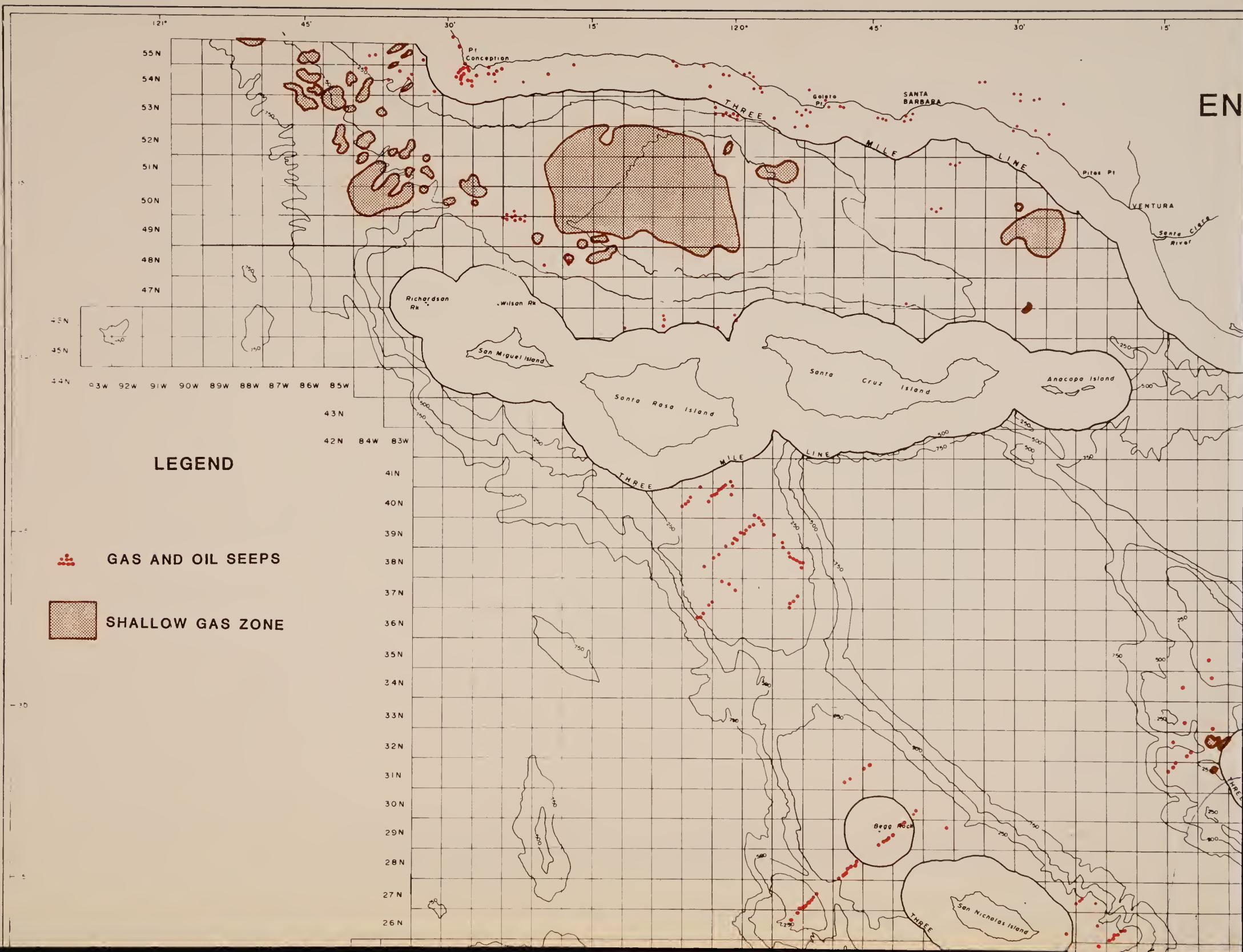
ENVIRONMENTAL IMPACT STATEMENT
LEASE SALE NO. 68

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
PACIFIC OUTER CONTINENTAL SHELF OFFICE

SHALLOW OIL AND GAS

SOUTHERN CALIFORNIA OFFSHORE AREA



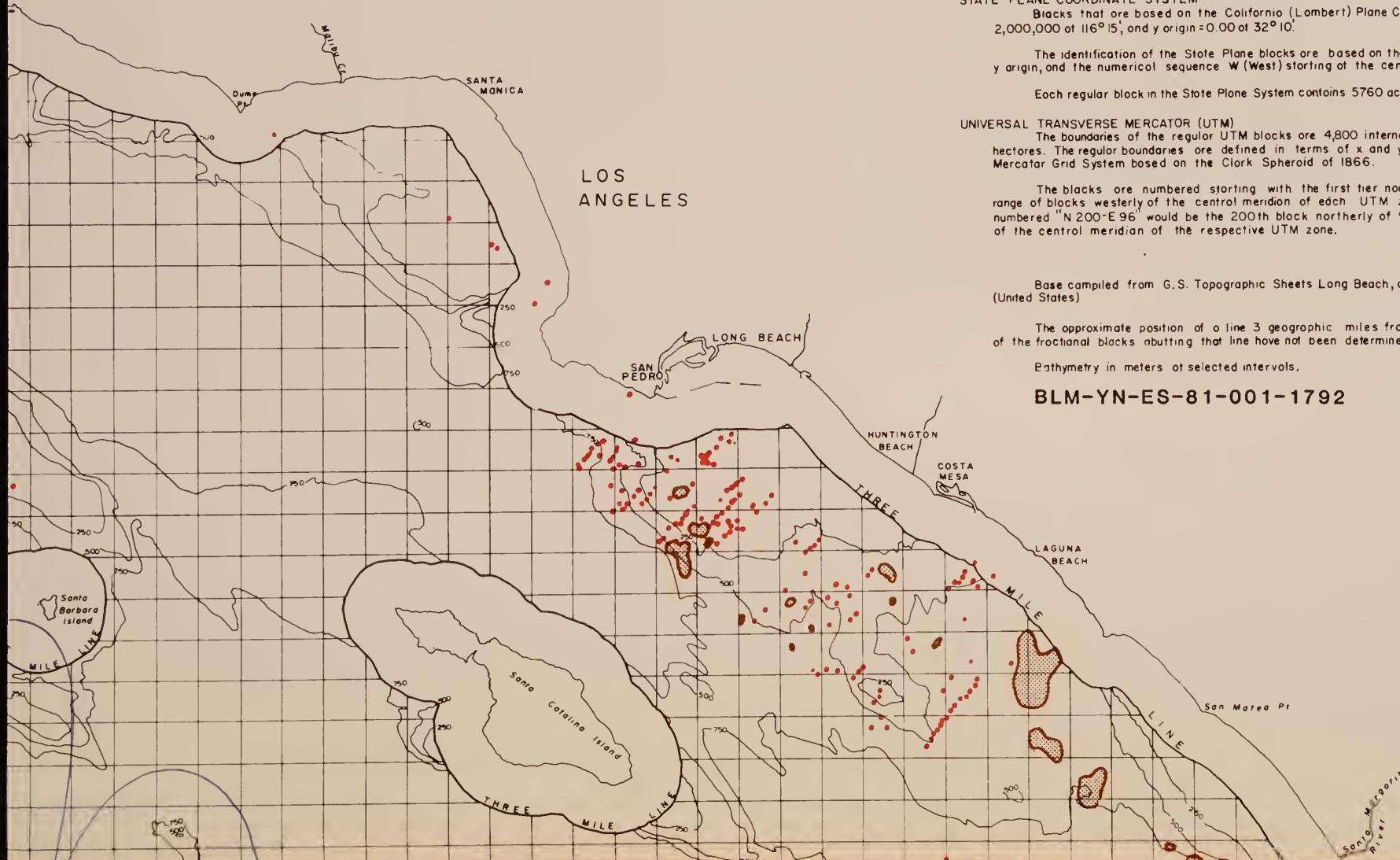


ENVIRONMENTAL IMPACT STATEMENT LEASE SALE NO. 68

SHALLOW OIL AND GAS

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
PACIFIC OUTER CONTINENTAL SHELF OFFICE

SOUTHERN CALIFORNIA OFFSHORE AREA



SCALE 1:760,000

STATE PLANE COORDINATE SYSTEM

Blocks that are based on the California (Lambert) Plane Coordinate System Zone 6, have an x origin = 2,000,000 of 116° 15' and y origin = 0.00 of 32° 10'.

The identification of the State Plane blocks are based on the numerical sequence N (North) starting at y origin, and the numerical sequence W (West) starting of the central meridian. Example Block 26 N-82W.

Each regular block in the State Plane System contains 5760 acres.

UNIVERSAL TRANSVERSE MERCATOR (UTM)

The boundaries of the regular UTM blocks are 4,800 international meters on a side and contain 2,304^{34°00'} hectares. The regular boundaries are defined in terms of x and y coordinates of the Universal Transverse Mercator Grid System based on the Clark Spheroid of 1866.

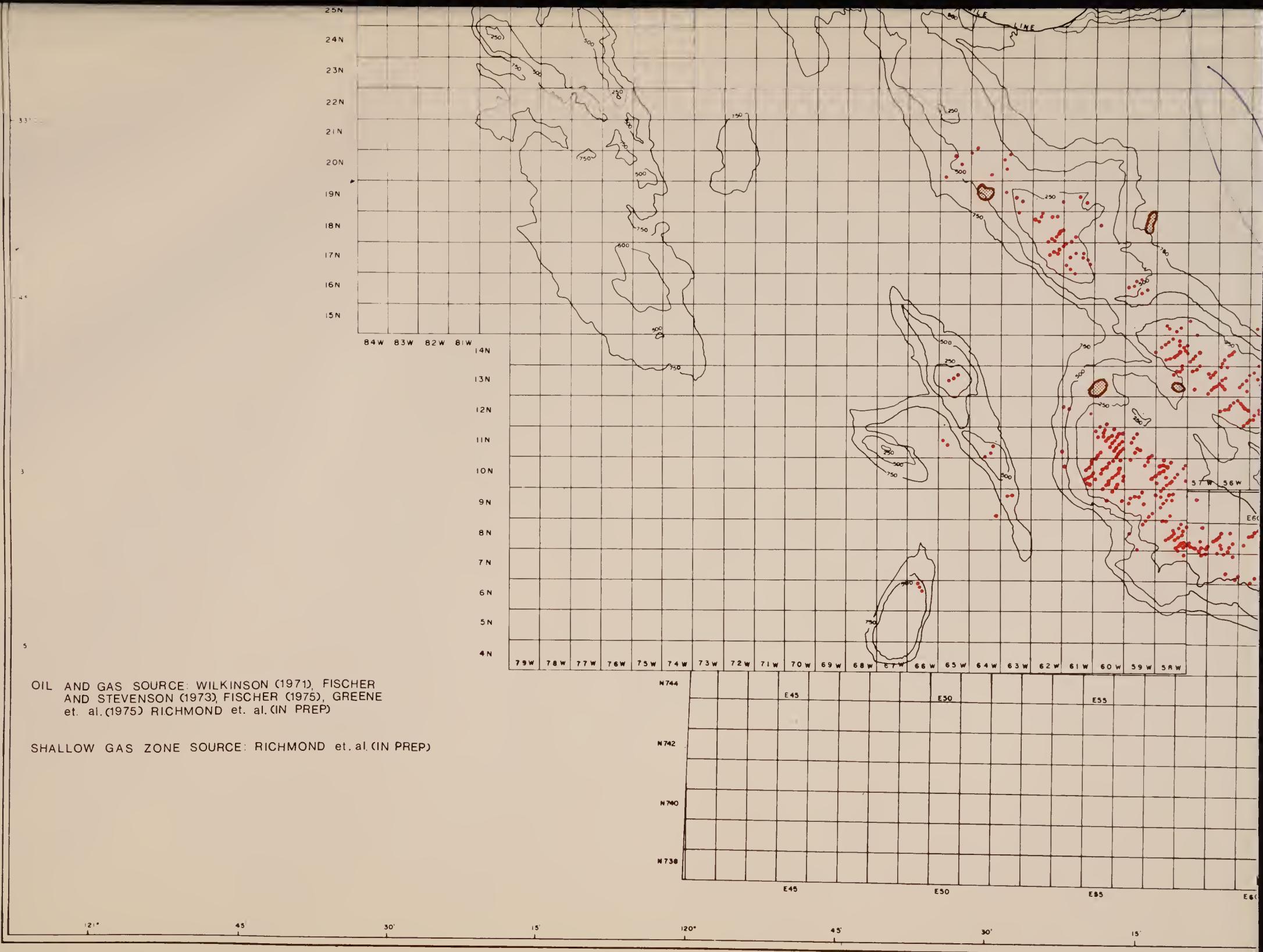
The blocks are numbered starting with the first tier northerly of the equator as "N 1". The first range of blocks westerly of the central meridian of each UTM zone is designated "E 100". Thus, a block numbered "N 200-E 96" would be the 200th block northerly of the equator and the 5th block westerly of the central meridian of the respective UTM zone.

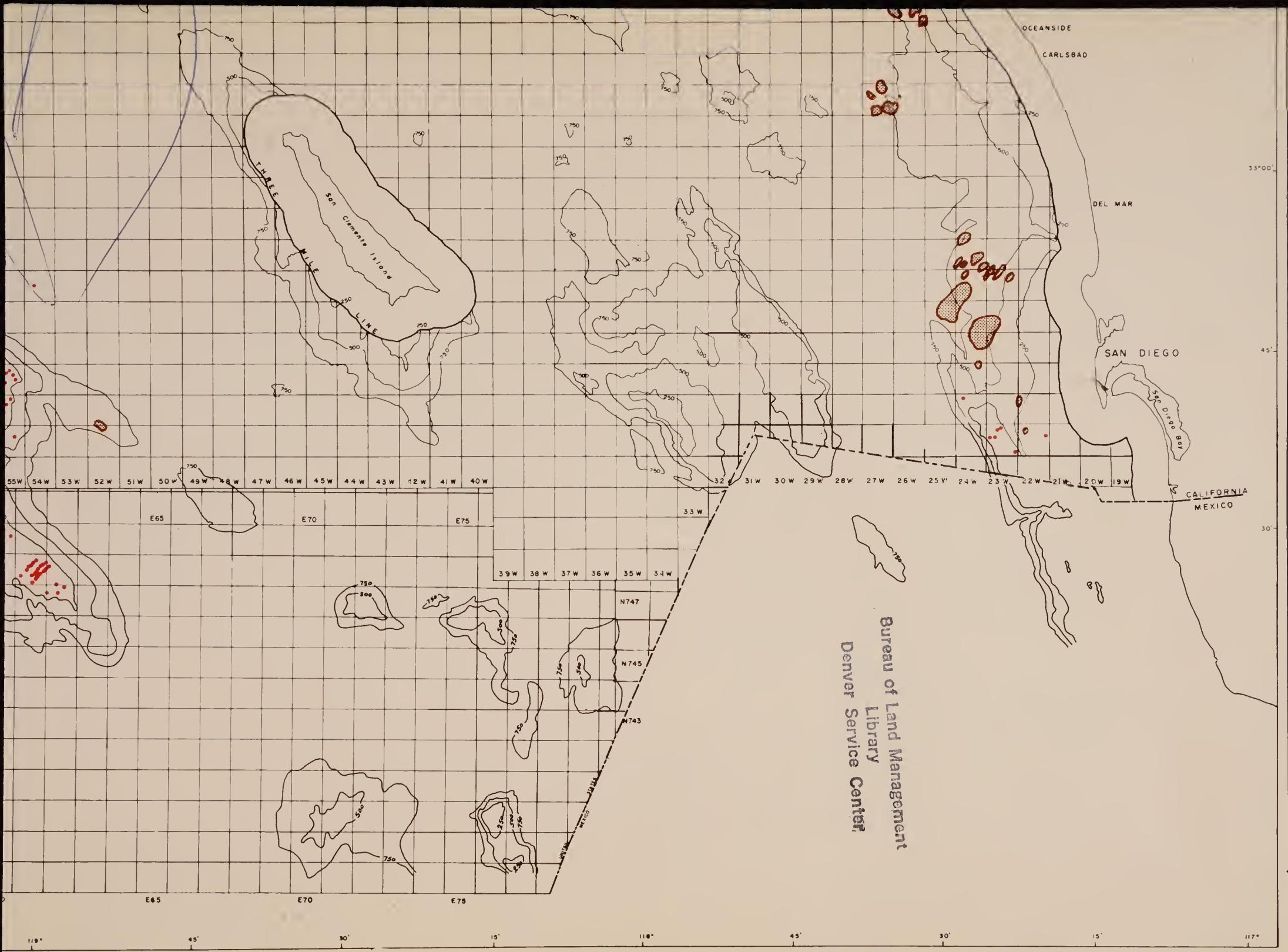
Base compiled from G.S. Topographic Sheets Long Beach, and Santa Maria, 1:250,000 series.
(United States)

The approximate position of a line 3 geographic miles from the coast is shown thus— The areas of the fractional blocks abutting that line have not been determined.

Bathymetry in meters of selected intervals.

BLM-YN-ES-81-001-1792





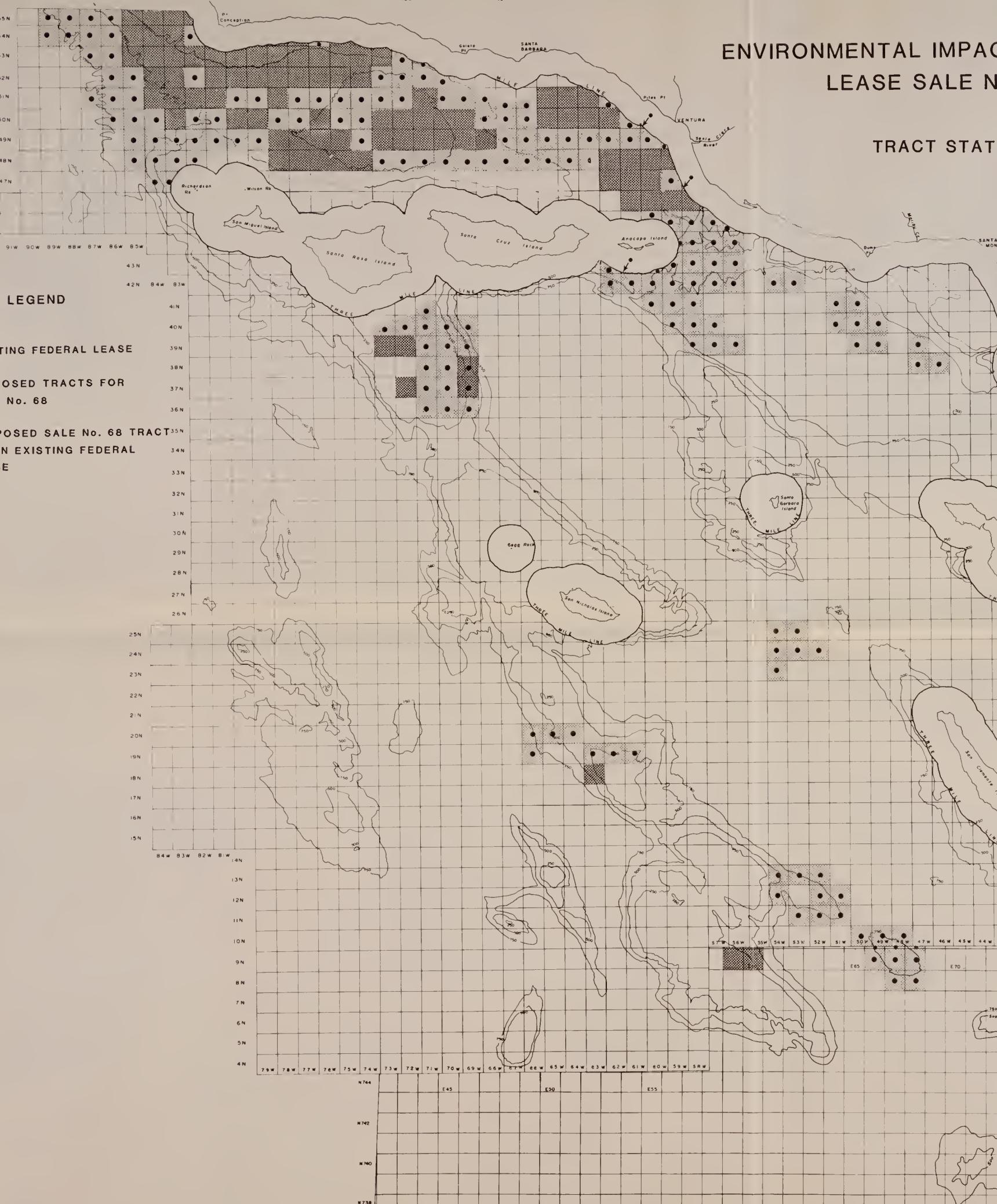
Bureau of
Land Management
Denver Service Center

**ENVIRONMENTAL IMPACT STATEMENT
LEASE SALE NO. 68**

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
PACIFIC OUTER CONTINENTAL SHELF OFFICE

TRACT STATUS

SOUTHERN CALIFORNIA OFFSHORE AREA



LEGEND

- EXISTING FEDERAL LEASE
- PROPOSED TRACTS FOR
SALE NO. 68
- PROPOSED SALE NO. 68 TRACT
ON AN EXISTING FEDERAL
LEASE

SOUTHERN CALIFORNIA OFFSHORE AREA

SCALE 1:760,000

STATE PLANE COORDINATE SYSTEM
Blocks that are based on the California (Lambert) Plane Coordinate System Zone 6, have an origin
2,000,000 of 116°15' and y origin=0.00 at 32°10'

The identification of the State Plane blocks are based on the numerical sequence N(North) starting at
y origin, and the numerical sequence W(West) starting at the central meridian. Example Block 26 N 82 W

Each regular block in the State Plane System contains 5760 acres

UNIVERSAL TRANSVERSE MERCATOR (UTM)
The boundaries of the regular UTM blocks are 4,800 international meters on a side, and contain 2,304³⁴ acres.
The regular boundaries are defined in terms of x and y coordinates of the Universal Transverse
Mercator Grid System based on the Clark Spheroid of 1866.

The blocks are numbered starting with the first northerly of the quadrilaterals "N". The first
range of blocks westerly of the central meridian of each UTM zone is designated "E 100". Thus, a block
numbered "N 200-E 96" would be the 200th block northerly of the equator and the 5th block westerly
of the central meridian of the respective UTM zone.

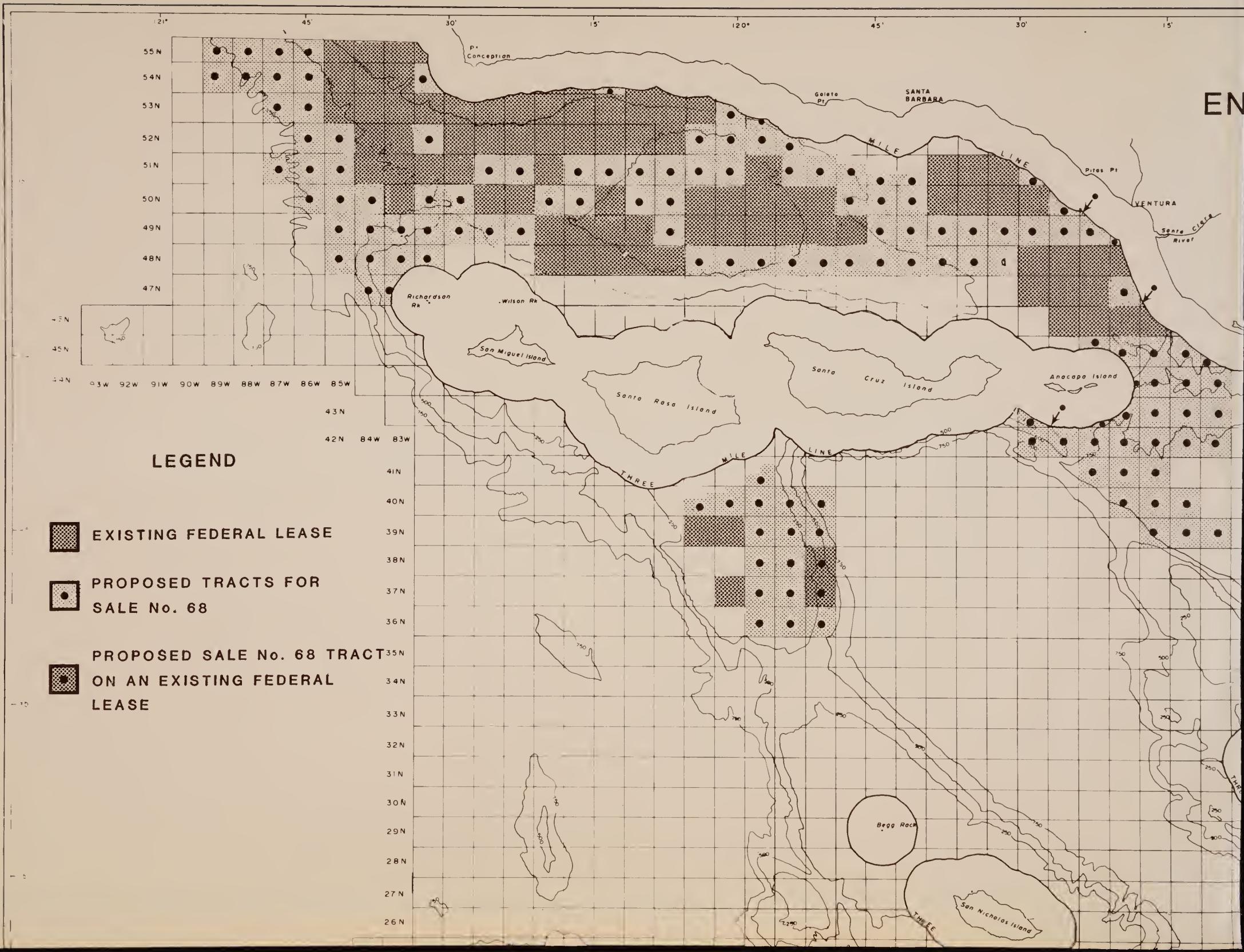
Base compiled from G.S. Topographic Sheets Long Beach, and Santa Monica, I-250,000 series.
(United States)

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of the fractional blocks abutting that line have not been determined.

Bottometry in meters at selected intervals.

BLM-YN-ES-81-001-1792

Bureau of Land Management
Denver Library Service Center



VIRONMENTAL IMPACT STATEMENT LEASE SALE NO. 68

TRACT STATUS

119° 46° 30° 15° 118° 45° 30° 15° 117°

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
PACIFIC OUTER CONTINENTAL SHELF OFFICE

SOUTHERN CALIFORNIA OFFSHORE AREA

SCALE 1:760,000
0 5,000 10,000 60,000 100,000 FEET

STATE PLANE COORDINATE SYSTEM

Blocks are based on the California (Lambert) Plane Coordinate System Zone 6, have an x origin= 2,000,000 at 116° 15' and y origin = 0.00 at 32° 10'

The identification of the State Plane blocks are based on the numerical sequence N (North) starting at y origin, and the numerical sequence W (West) starting at the central meridian. Example Block 26 N-82W.

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UNIVERSAL TRANSVERSE MERCATOR (UTM)

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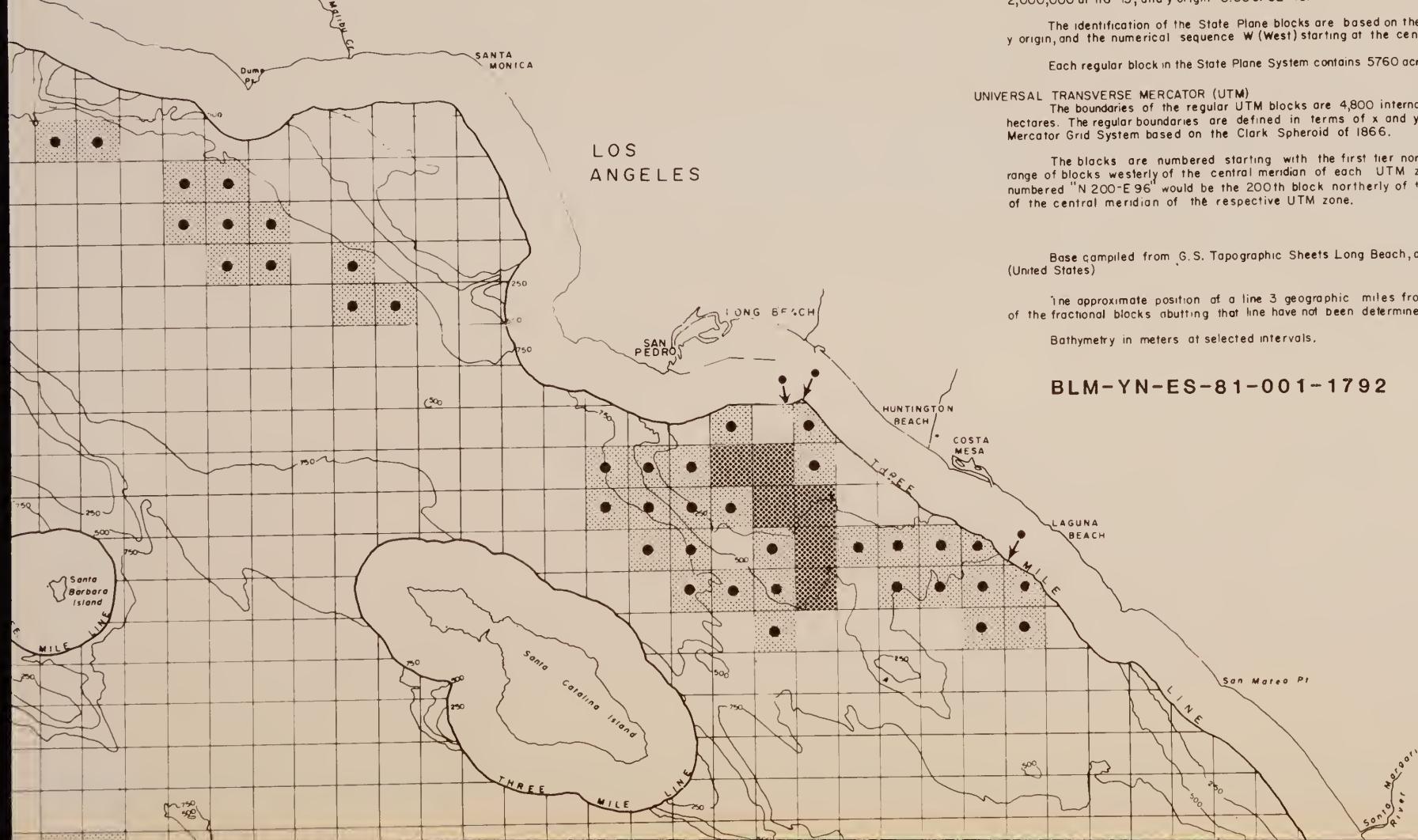
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Base compiled from G.S. Topographic Sheets Long Beach, and Santa Maria, 1:250,000 series.
(United States)

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Bathymetry in meters at selected intervals.

BLM-YN-ES-81-001-1792

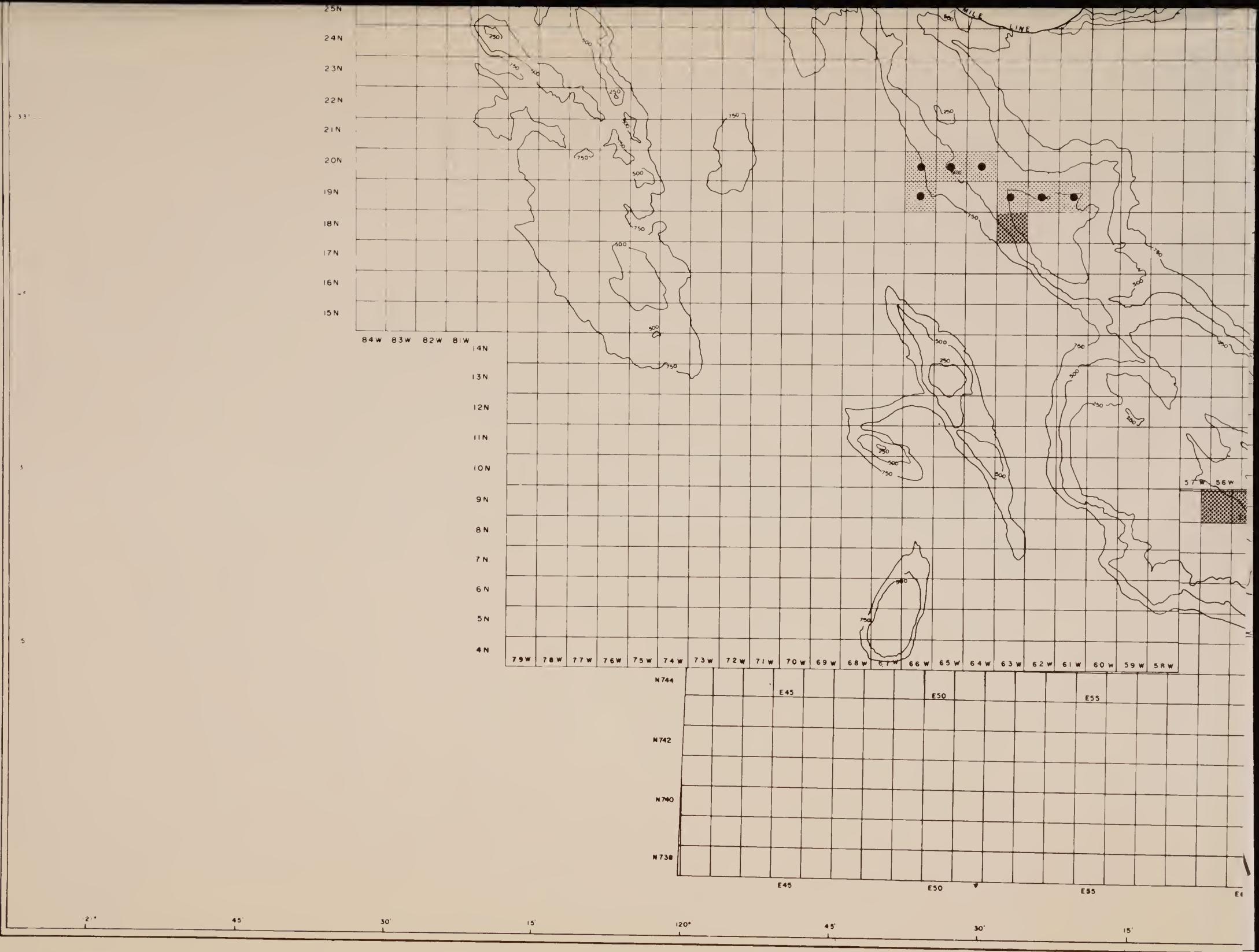


30°

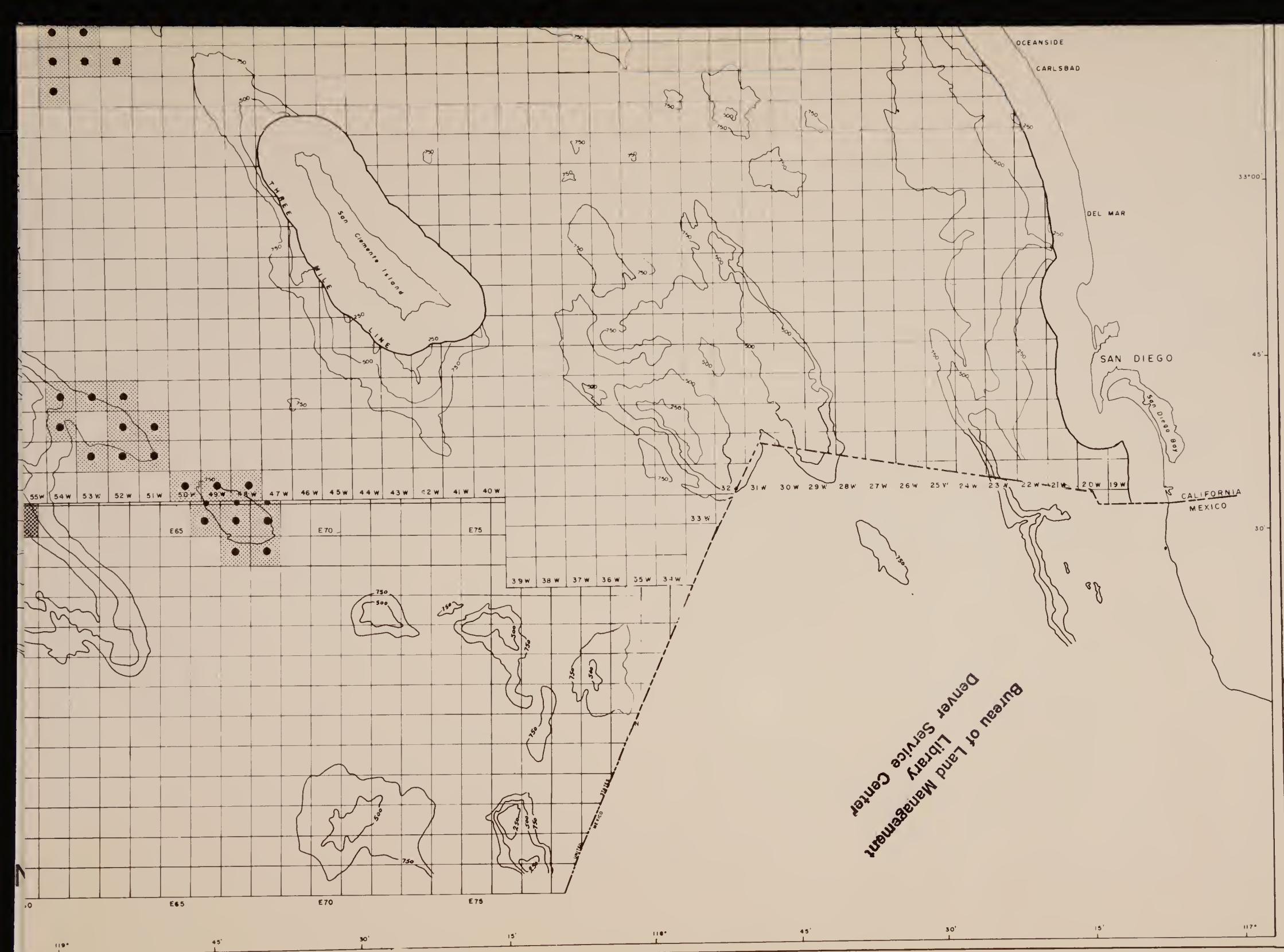
45°

30°

15°



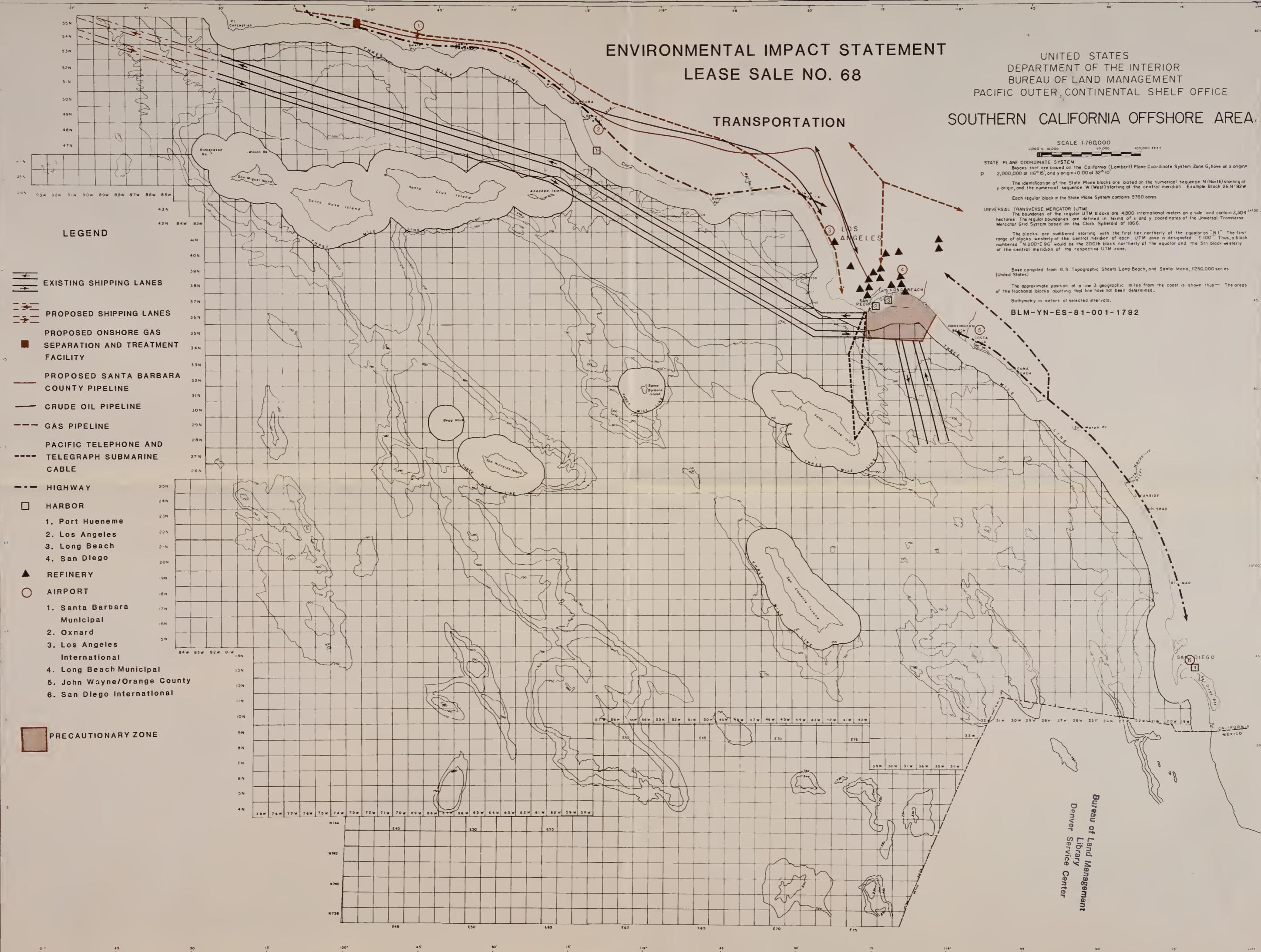
Bureau of Land Management
Library Service Center
Denver Service Center

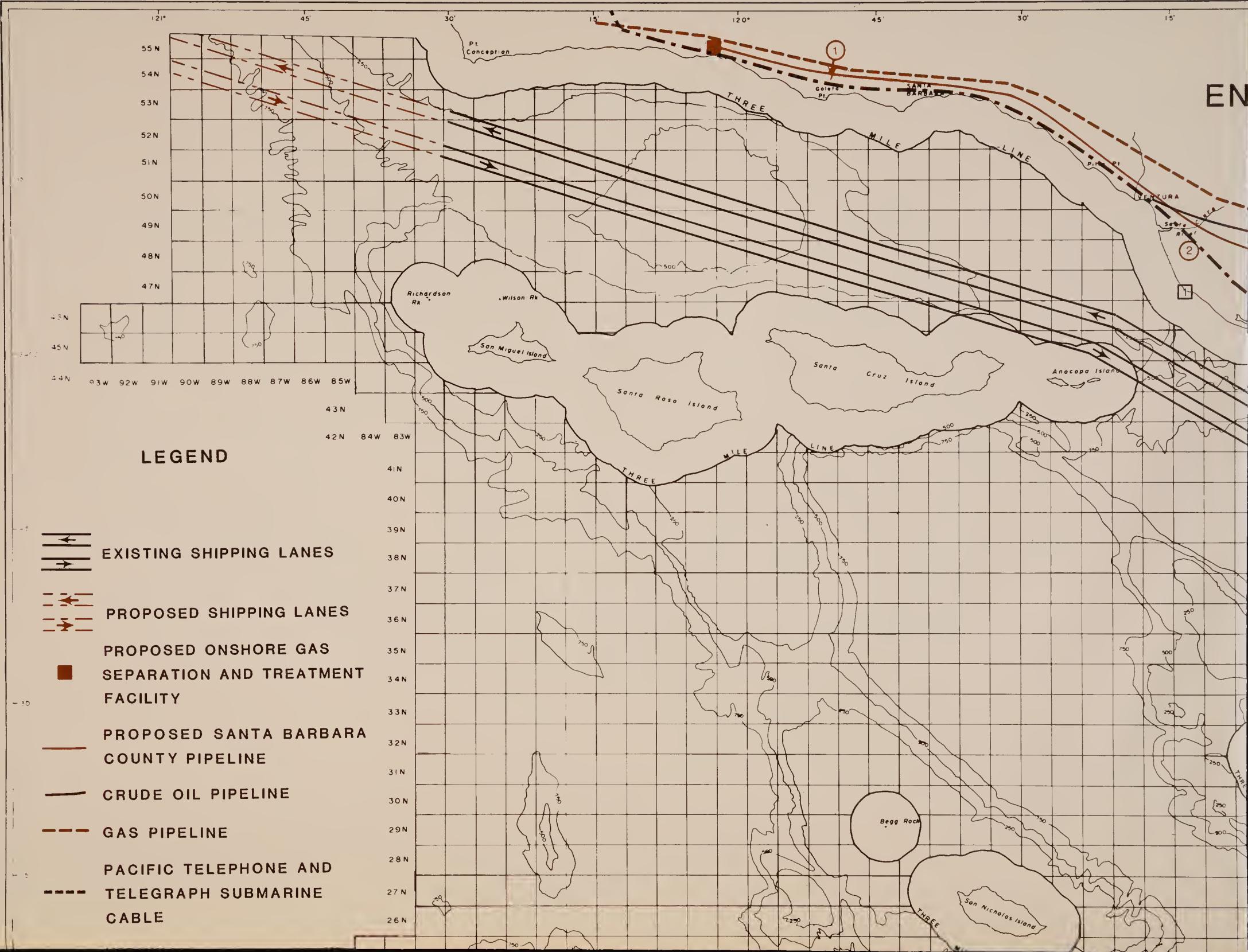


**ENVIRONMENTAL IMPACT STATEMENT
LEASE SALE NO. 68**

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
PACIFIC OUTER CONTINENTAL SHELF OFFICE

SOUTHERN CALIFORNIA OFFSHORE AREA

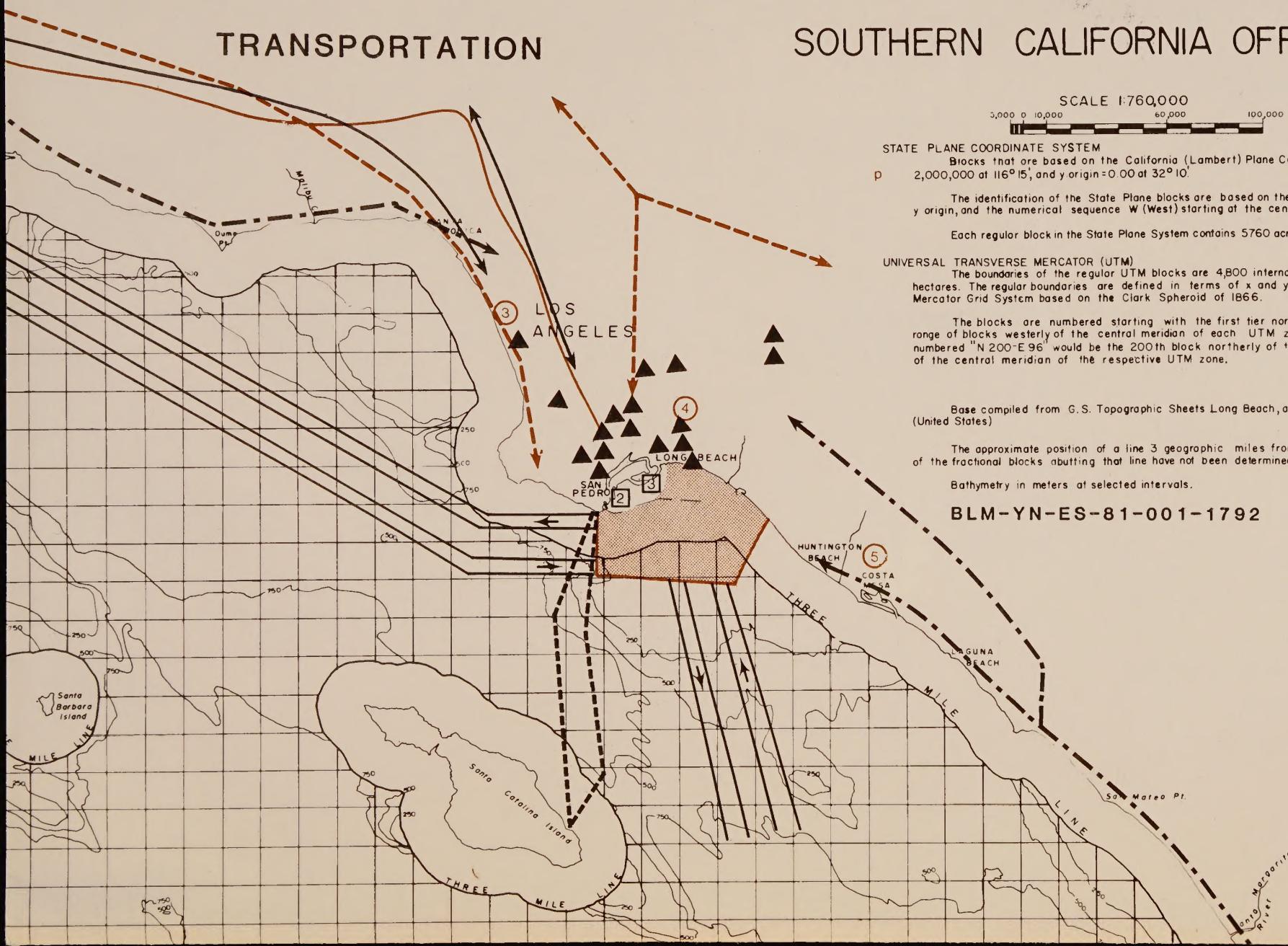




ENVIRONMENTAL IMPACT STATEMENT LEASE SALE NO. 68

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
PACIFIC OUTER CONTINENTAL SHELF OFFICE

TRANSPORTATION



SOUTHERN CALIFORNIA OFFSHORE AREA

SCALE 1:760,000
0 10,000 60,000 100,000 FEET

STATE PLANE COORDINATE SYSTEM

Blocks that are based on the California (Lambert) Plane Coordinate System Zone 6, have an x origin = 2,000,000 of $116^{\circ}15'$, and y origin = 0.00 at $32^{\circ}10'$.

The identification of the State Plane blocks are based on the numerical sequence N (North) starting at y origin, and the numerical sequence W (West) starting at the central meridian. Example Block 26 N-82W.

Each regular block in the State Plane System contains 5760 acres.

UNIVERSAL TRANSVERSE MERCATOR (UTM)

The boundaries of the regular UTM blocks are 4,800 international meters on a side, and contain 2,304^{34°00'} hectares. The regular boundaries are defined in terms of x and y coordinates of the Universal Transverse Mercator Grid System based on the Clark Spheroid of 1866.

The blocks are numbered starting with the first tier northerly of the equator as "N 1". The first range of blocks westerly of the central meridian of each UTM zone is designated "E 100". Thus, a block numbered "N 200-E 96" would be the 200th block northerly of the equator and the 5th block westerly of the central meridian of the respective UTM zone.

Base compiled from G.S. Topographic Sheets Long Beach, and Santa Maria, 1:250,000 series.
(United States)

The approximate position of a line 3 geographic miles from the coast is shown thus— The areas of the fractional blocks abutting that line have not been determined.

Bathymetry in meters at selected intervals.

BLM-YN-ES-81-001-1792

HIGHWAY

HARBOR

1. Port Hueneme
2. Los Angeles
3. Long Beach
4. San Diego

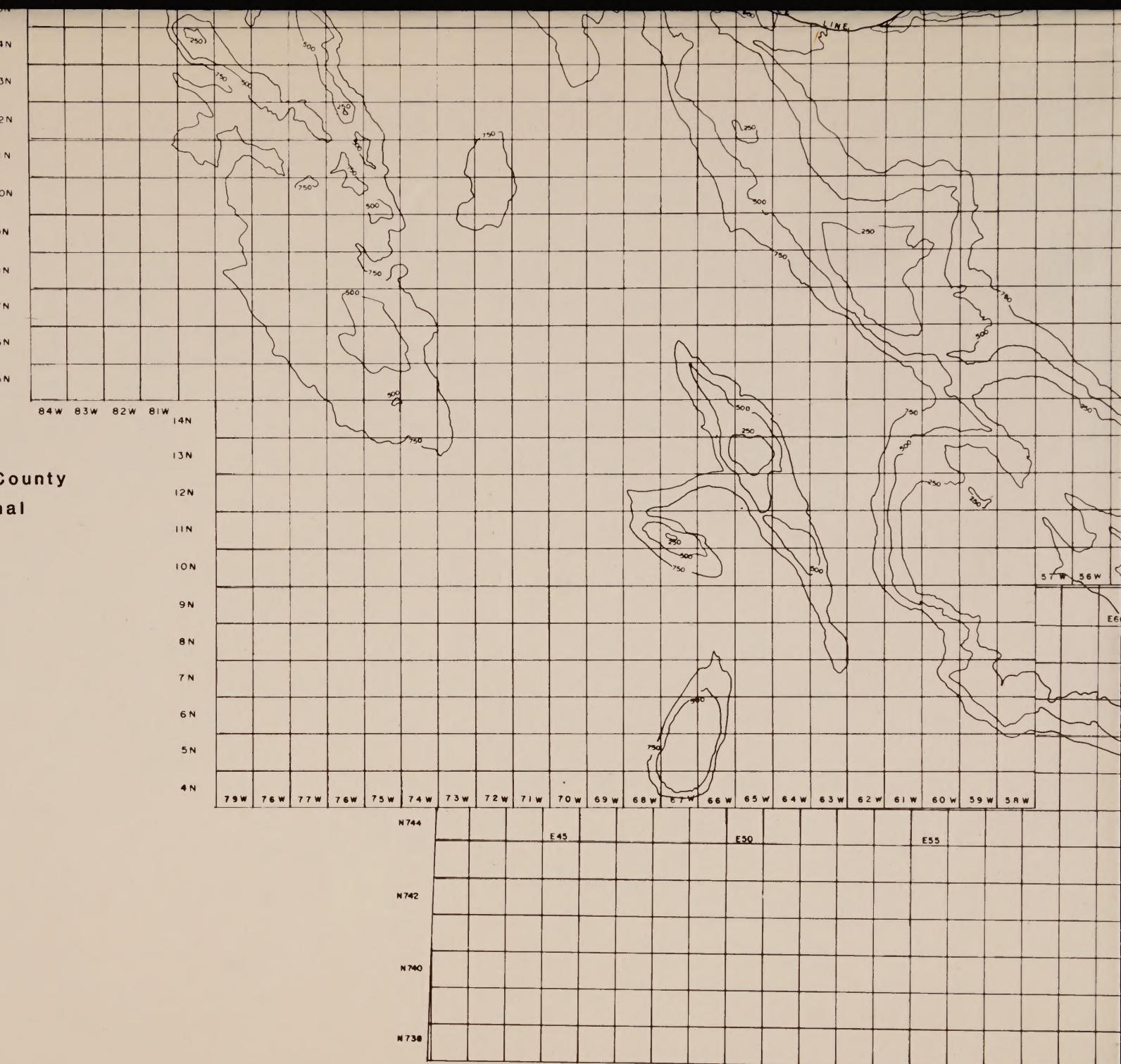
REFINERY

AIRPORT

1. Santa Barbara Municipal
2. Oxnard
3. Los Angeles International
4. Long Beach Municipal
5. John Wayne/Orange County
6. San Diego International



PRECAUTIONARY ZONE



121°

45°

30°

15°

120°

45°

30°

15°



OCS

Borrower's Card

no. 68

DES 1982 Outer Continental shelf oil and gas lease
1982 sale offshore Southern California.

v.2

Date Loaned	Borrower	Division	Date Ret'd

DSC 1279-3a (Feb. 1977)